

treated product of the culture broth selected from the group consisting of a concentrated product of the culture broth, a dried product of the culture broth, cells obtained by centrifuging the culture broth, a dried product of the cells, a freeze-dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, an ultrasonic-treated product of the cells, a mechanically disrupted product of the cells, an enzyme-treated product of the cells, a protein fraction of the cells, an immobilized product of the cells and an enzyme preparation obtained by extraction from the cells, and b) a culture broth or culture broths of at least one strain of microorganism having genes responsible for production of a sugar nucleotide from a sugar selected from the group consisting of glucose, fructose, galactose, N-acetylglucosamine, N-acetylgalactosamine, mannose, N-acetylmannosamine and N-acetylneuraminic acid, or a treated product of the culture broth selected from the group consisting of a concentrated product of the culture broth, a dried product of the culture broth, cells obtained by centrifuging the culture broth, a dried product of the cells, a freeze-dried product of the cells, a surfactant-treated product of the cells, an ultrasonic-treated product of the cells, a mechanically disrupted product of the cells, an enzyme-treated product of the cells, and a protein fraction of the cells, an immobilized product of the cells and an enzyme preparation obtained by extraction from the cells;

allowing the enzyme sources, the nucleotide precursor and the sugar to be present in an aqueous medium to form and accumulate the sugar nucleotide in the aqueous medium; and

recovering the sugar nucleotide from the aqueous medium.